UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/972,290	10/04/2001	Satoshi Yoshizawa	16869B-018800US	3346

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AHMED, FAROOQUE

ART UNIT	PAPER NUMBER
2157	

DATE MAILED: 12/09/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

PTO-90C (Rev. 10/03)

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE _3_ MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☐ Responsive to communication(s) filed on _10/04/01_.
2a)☐ This action is **FINAL**.   2b)☒ This action is non-final.
3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) _1-31_ is/are pending in the application.
   4a) Of the above claim(s) _____ is/are withdrawn from consideration.
5)☐ Claim(s) _____ is/are allowed.
6)☒ Claim(s) _1-31_ is/are rejected.
7)☐ Claim(s) _____ is/are objected to.
8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.
10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.
   Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
   Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
   a)☐ All   b)☐ Some * c)☐ None of:
      1.☐ Certified copies of the priority documents have been received.
      2.☐ Certified copies of the priority documents have been received in Application No. _____.
      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
   * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☒ Notice of References Cited (PTO-892)
2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3)☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
   Paper No(s)/Mail Date _10/04/01_.
4)☐ Interview Summary (PTO-413)
   Paper No(s)/Mail Date. _____.
5)☐ Notice of Informal Patent Application (PTO-152)
6)☐ Other: _____.

DETAILED ACTION

1. The action is response to application filed on 10/04/01. Claims 1-31 are pending.

Claims 1-31 represent Method and Apparatus for Programmable Network Router

and Switch.

Claim Rejections - 35 USC § 102

(e) the invention was described in a patent granted on an application for patent by another filed in the
United States before the invention thereof by the applicant for patent, or on an international application
by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this
title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act

of 1999 (AIPA) and the Intellectual Property and High Technology Technical

Amendments Act of 2002 do not apply when the reference is a U.S. patent resulting

directly or indirectly from an international application filed before November 29, 2000.

Therefore, the prior art date of the reference is determined under 35 U.S.C. 102(e) prior

to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

(e) the invention was described in (1) an application for patent, published under section 122(b), by
another filed in the United States before the invention by the applicant for patent or (2) a patent
granted on an application for patent by another filed in the United States before the invention by the
applicant for patent, except that an international application filed under the treaty defined in section
351(a) shall have the effects for purposes of this subsection of an application filed in the United States
only if the international application designated the United States and was published under Article 21(2)
of such treaty in the English language.

2.   Claims 1-31 are rejected under 35 U.S.C. 103(a) as being unpatentable over

Kalapathy et al. US Patent No. 6,810,037.

Kalapathy teaches the invention substantially as claimed include system and

methods the step to divided the storing a address in memory and sorted in order. (See

abstract).

As claim 1, Kalapathy teaches a system for providing information to a stored

program operating on a computer coupled to a device connected to a network, the

device comprising:

at least one input port for receiving information from a source coupled to

the network;(see col. 2, lines 8-24; col. 6, lines 35-55; col. 23, lines, 10-23, Kalapathy

disclose switch network where packet are send to least one port in VLAN);

at least one output port for providing the information from the source to a

destination, the computer being coupled to receive information addressed to the

computer from the output port;(col. 6, lines 35-55; col. 4, lines 15-25, Kalapathy

disclose sending packet information from source to destination to one off output port

and these port are connected to medium);

a flow control table for storing entries which each include

source addresses representative of at least one source of

information arriving at the input port (See , col. 1, lines 55-60; col. 4, lines, 15-25

;col. 23, lines 10-67; col. 24 Kalapathy disclose Mac address table for storing in VLAN

address are identified one of the incoming packet to port).

destination addresses representative of at least one of the

destinations to which the arriving information is to be sent from the output port

(col. 22, lines 10-26, Kalapathy disclose VLAN identified one packet received by

destination port for destination Mac address);

action information for each address which action information

includes at least one reference to the stored program (col. 22, lines 10-67 ;col.35,

lines 40- 67, Kalapathy disclose ARL engine perform a look-up based upon tagged

VLAN table);

wherein the computer coupled to receive information from the output port

receives information addressed to it and uses the received information in

execution of the stored program.(see col.7,lines 29-59; col.55 lines 11-67,Kalapathy

disclose ingress receive a packet on output port where receive information to load in

configure register).

As to claim 2, Kalapathy teaches the method as recited in claim 1, wherein the

action information includes default priority information used to control information which

does not otherwise have an entry in the flow control table (see col.11, lines 1-25; col. 23, lines10-67, Kalapathy disclose priority bit vales are used to send the packet to CPU in VLAN table to control the address).

As to claim 3, Kalapathy teaches the method as recited in claim 2, wherein the system includes a switch for switching information and a controller coupled to the switch for storing the flow control table and controlling the switch in response thereto (See col. 23, lines 9-67, Kalapathy disclose switching data packet on SOC based on Mac address on to port of EPIC can hold in tables Mac address).

As to claim 4, Kalapathy teaches the method as recited in claim 3, wherein the switch comprises a router and the flow control table is maintained by a controller in the router (see col.23 lines 9-67 Kalapathy disclose switch and router where ARP mange the Mac address in router).

As to claim 5, Kalapathy teaches the method as recited in claim 4, wherein the router controller is itself controlled by a computer (See col. 23, lines 9-67 Kalapathy disclose CMIC coupled with SOC run in host cups where VLAN table is maintained by router).

As to claim 6, Kalapathy teaches the method as recited in claim 3, wherein the router controller manages the flow control table using an applications program interface (See col. 23, lines 9-67 Kalapathy disclose router where ARP mange the Mac address in router).

As to claim 7, Kalapathy teaches the method as recited in claim 2, wherein the system comprises an IP router (see col. 23, lines 10-55 Kalapathy disclose an ip router).

As to claim 8, Kalapathy teaches the method as recited in claim 2, wherein the system comprises an IP switch (See col. 23, lines 10-55, Kalapathy disclose an ip switching).

As to claim 9, Kalapathy teaches the method as recited in claim 1,wherein the action information in flow control table is established by an applications program interface which communicates with the system (See col 23, lines 10-67,Kalapathy disclose packets are sent on CSP channel through router interfaces).

As to claim 9, Kalapathy teaches the method as recited in claim 9, wherein the applications program interface employs an argument which includes an if ' portion for determining the origin of the source of received information, and a then" portion for specifying handling of the received information (See col 6, lines 1-55, Kalapathy disclose CPU MIC uses "CPS" channel to communicated and determined where packet are send and receive).

As to claim 11, Kalapathy teaches the method as recited in claim 10, wherein the then portion includes a Reference to the stored program (.see col. 39 lines, 1-39 Kalapathy disclose programmable parameter in COS manner in SOC).

As to claim 12, Kalapathy teaches the method as recited in claim 11, wherein the then portion further includes a parameters to be supplied to the stored program (see col. 39 lines, 1-39, Kalapathy disclose programmable parameter in COS manner in SOC).

As to claim 13, Kalapathy teaches the method as recited in claim 11, wherein the then portion further includes a location at which the stored program is to be executed

(see col. 36 lines, 1-39, Kalapathy disclose programmed to be determined the where EPIC to be input in SOC).

As to claim 14, Kalapathy teaches the method as recited in claim 1, wherein the stored program is used to manage a network (See col. 39 lines, 1-39 Kalapathy disclose programmable parameter in COS manager in switch application).

Kalapathy teaches the invention substantially as claimed include system and methods the step to divided the storing a address in memory and sorted in order. (See abstract)

As claim 15, Kalapathy teaches method for providing information to a stored program operating on a computer coupled to an output port of a device in a network, the method comprising:

providing the information to the network in a format which includes

address information to direct the information to the device (col. 6, lines 35-55; col. 4, lines 15-25, Kalapathy disclose sending packet information from source to destination to one off output port and these port are connected to medium);

in the device, storing a flow control table which has entries which each

include source addresses representative of at least one source of information arriving at the device, destination addresses representative of at least one of the destinations to which the arriving information is to be sent from the output port and action information for each destination address (see col. 24 lines,1-58, Kalapathy disclose SOC where Mac address entries in table determined the sources address

where packet are receive and port where the packets are sent to destination IN ARL

table);

wherein the action information in the flow control table includes at least

one program reference, and wherein the computer coupled to receive information

from the output port receives information addressed to it and uses the received

information in execution of the stored program.((see col. 23, lines 10-67;col. 24 lines,1-

58, , Kalapathy disclose VLAN Mac address table with SOC where it target the packet

to the router).

As to claim 16, Kalapathy teaches the method as recited in claim15, wherein the

action information includes default information used to control information which does

not otherwise have an entry in the flow control table (see col.11, lines 1-25; col. 23,

lines10-67, Kalapathy disclose priority bit are used to send the packet to CPU in VLAN

table control the address).

As to claim 17, Kalapathy teaches the method as recited in claim 15, further

including a step of using the computer to control the switching system (see col. 23, lines

10-67, Kalapathy disclose CMIC run between   SOC and host CPU).

As to claim 18, Kalapathy teaches the method as recited in claim 17, wherein the

computer is used to control a network (See col. 23, lines 10-67, Kalapathy disclose

router managing the address).

Kalapathy teaches the invention substantially as claimed include method, system and network switches use the step to divided the storing a address in memory and sorted in order. (See abstract)

As claim to 19, Kalapathy teaches a device adapted for connection to a network, the device for providing information to a stored program operating on a computer coupled to the device, the device comprising:

at least one input port for receiving information from a source; ;(see col. 2, lines 8-24; col. 6, lines 35-55; col. 23, lines, 10-23, Kalapathy disclose switch network where packet are send to least one port in VLAN);

at least one output port for providing the information from the source to a destination (See col. 6, lines 35-55; col. 4, lines 15-25, Kalapathy disclose sending packet information from source to destination to one off output port and these port are connected to medium);

a flow control table for storing entries which each include

information arriving at the input port; (See , col. 1, lines 55-60; col. 4, lines, 15-25 ;col. 23, lines 10-67; col. 24 Kalapathy disclose Mac address table for storing in VLAN address are identified one of the incoming packet to port);

destination addresses representative of at least one of the

destinations to which the arriving information is to be sent from the output port (See col. 22, lines 10-26, Kalapathy disclose VLAN identified one packet received by destination port for destination Mac address);

action information for each address which action information

includes at least one reference to the stored program (see col. 22, lines 10-67 ;col.35, lines 40- 67, Kalapathy disclose ARL engine perform a look-up based upon tagged VLAN table);

wherein information from the output port is transmitted to the computer

for use in execution of the stored program (Kalapathy disclose packet are send to port to send to switches in SOC).

As to claim 20, Kalapathy teaches the device as recited in claim 19, wherein the source comprises a source of information coupled to the network (see col. 6, lines 3-56 Kalapathy disclose high speed data transfer between source and destination over devices).

As to claim 21, Kalapathy teaches the device as recited in claim 20,wherein the computer is directly connected to the output port (col.4, lines, 15 –25, Kalapathy disclose switch receive a packet to out port).

As to claim 22, Kalapathy teaches the device as recited in claim 19,wherein the action information includes default priority information used to control information which does not otherwise have an entry in the flow control table (see col.11, lines 1-25; col. 23, lines10-67, Kalapathy disclose priority bit are used to send the packet to CPU in VLAN table control the address).

As to claim 23, Kalapathy teaches the device as recited in claim 19,wherein the device includes a switch for switching information based on the destination addresses, and a controller coupled to the switch for storing the flow control table and controlling

the switch in response thereto (See col. 23, lines 9-67 Kalapathy disclose switching data packet on SOC based on Mac address on to port of EPIC can hold in tables Mac address).

As to claim 24, Kalapathy teaches the device as recited in claim 23,wherein the switch comprises a router (See col.23 lines 10 -67 Kalapathy disclose switch communication with router).

As to claim 25, Kalapathy teaches the device as recited in claim 24,wherein the controller is itself controlled by a computer (See col.23 lines 10 -67 Kalapathy disclose SOC run CMIC on switch communication).

As to claim 26, Kalapathy teaches the device as recited in claim 20,wherein the controller manages the flow control table using an applications program interface (see col 23, lines 10-67,Kalapathy disclose packet are sent on CSP channel through router interfaces).

As to claim 27, Kalapathy teaches the device as recited in claim 23,wherein the he action information in the flow control table is established by an applications program interface which communicates with the device.

As to claim 28, Kalapathy teaches the device as recited in claim 27,wherein the applications programs interface employs an argument which includes an if ' portion for determining the origin of the source of received information, and a t<then" portion for specifying handling of the received information (See col 6, lines 1-55, Kalapathy disclose CPU MIC uses "CPS" channel to communicated and determined where packet are send and receive).

As to claim 29, Kalapathy teaches the device as recited in claim 28,wherein the <then" portion includes a reference to the stored program (col. 36 lines 12-41, Kalapathy disclosed AND pointed to CMIC stored in SOC).

As to claim 30, Kalapathy teaches the device as recited in claim 29,wherein the then" portion further includes a parameter to be supplied to the stored program. (See col .39, lines 1-35, Kalapathy disclosed programmable parameter in COS manger can programmed based on switch application).

As to claim 31, Kalapathy teaches the device as recited in claim 29,wherein the then" portion further includes a location at which the stored program is to be executed. (See col .7, lines 29-41,col. 36 lines 12-41, Kalapathy disclosed FFP is programmed by the user through CPU where BIT map which applied with AND to selected the packet filter).

As to claim 32, Kalapathy teaches the device as recited in claim 20,wherein the stored program is used to manage the network.(see col .7, lines 29-41, Kalapathy disclosed CMIC which provide and mange different resource Between SOC and host CPU). .

3. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Farooque Ahmed whose telephone number is 703-605-4212. The examiner can normally be reached on M-F 8:30 to 5:00

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ario Etienne can be reached on (703) 308-7562. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Farooque Ahmed/Examiner
Art Unit 2157

MOUSTAFA M. MEKY
PRIMARY EXAMINER